



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,592	07/16/2002	Kenichi Ajiki	2002_0229A	3836
513	7590	03/01/2004	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			MAYO III, WILLIAM H	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			2831	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/069,592

Applicant(s)

AJIKI, KENICHI

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 16, 2004 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission of Prior Art (herein referred to as AOAPA) in view of Ferlier et al (Pat Num 4,808,966). AOAPA discloses a conventional insulated wire (Figs 5-7) for usage with electronic application devices (see applicant's description of prior art on pages 1-3). Specifically, with respect to claim 12, AOAPA discloses an enameled wire (Fig 6) comprising a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating coated layer (1c) covering and contacting the core wire (1b),

Art Unit: 2831

a melting layer (1d) covering the insulating coated layer (1c), wherein the insulating coated layer (1c) is formed of a material that absorbs a laser beam (page 2, paragraph 8 & 10), wherein the laser beam melts and strips away the insulating layer (1c) so that the core wire (1b) can be soldered (page 2, paragraphs 6-8). With respect to claim 16, AOAPA discloses that the melting layer (1d) softens or melts by heat (see page 2, paragraph 6). With respect to claim 17, AOAPA discloses that the insulated coated layer (1c) is melted by a laser beam such as CO<sub>2</sub> laser (Page 2, paragraphs 6-8).

soldering portion of the terminal (Fig 5). With respect to claim 21, AOAPA discloses a method of soldering a enameled wire (1) comprising the steps of irradiating a laser beam to an enameled wire (1) comprising a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c) covering the core wire (1b), wherein a laser beam melts and strips away the insulating layer (1c), a melting layer (1d) covering the insulating layer (1c), wherein the insulating layer (1c) is formed of a material that absorbs a laser beam (page 2, paragraph 8 & 10), stripping at least a part of the insulating coating (1c) by a laser beam (page 2 paragraphs 10-11) and soldering the core wire (1b) to a soldering portion (4) by a laser beam (pages 2-3, paragraph 12). With respect to claim 22, AOAPA discloses a method wherein the soldering portion has the same shape of the laser beam spot (Fig 7). With respect to claim 23, AOAPA discloses a method wherein the soldering portion has the same shape of the laser beam (Fig 7). With respect to claim 24, AOAPA discloses a method wherein a step of providing an empty space underneath the soldering portion of a soldering land (Fig 7). With respect to claim 25, AOAPA discloses a method comprising

irradiating a laser beam to an enameled wire (1) that includes a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c), a melting layer (1d). With respect to claim 26, AOAPA discloses a method comprising irradiating a laser beam to an enameled wire (1) that includes a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c), a melting layer (1d). With respect to claim 27, AOAPA discloses a method of irradiating a laser beam to an enameled wire (1) that includes a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c), a melting layer (1d). With respect to claim 28, AOAPA discloses a method of irradiating a laser beam to an enameled wire (1) that includes a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c), a melting layer (1d). With respect to claim 29, AOAPA discloses a method of irradiating a laser beam to an enameled wire (1) that includes a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating layer (1c), a melting layer (1d). With respect to claim 30, AOAPA discloses an electro-acoustic transducer (Fig 5) comprising a plate (3) having a center pole (2), a coil (1a) disposed on the plate (3) wherein the coil (1a) is formed of an enameled wire (Fig 6) comprising a core wire (1b) made of copper (page 1, paragraph 5 of applicant's specification), an insulating coated layer (1c) covering and contacting the core wire (1b) wherein the laser beam melts and strips away the insulating layer (1c) so that the core wire (1b) can be soldered (page 2, paragraphs 6-8), a melting layer (1d) covering the insulating coated layer (1c), wherein the insulating coated layer (1c) is formed of a material that absorbs a laser beam (page 2, paragraph 8 & 10), a terminal

Art Unit: 2831

(4) for connection with the enamel wire (1) molded with a resin with at least a soldering portion exposed outside (page 1, paragraph 4), a magnet (5) fixed to the plate (3), a diaphragm (6) disposed above the magnet (5) with a space to the center pole (2) which has to have a magnetic material disposed, and a resin body (7) having an empty space in at least a part underneath the soldering portion of the terminal (Fig 5). With respect to claims 31-25, AOAPA discloses that the insulating coated layer (1c) is formed of a material that absorbs a laser beam (page 2, paragraph 8 & 10).

However, AOAPA doesn't necessarily disclose an insulating coated layer being for efficiently absorbing the laser beam (claims 12 & 21), nor the insulating coating layer being a colored resin (claims 13, 25, & 31), nor the insulating coating layer being colored with dye or pigment (claims 14, 26, & 32), nor the insulating coating layer being non-transparent to the laser beam (claims 15, 18, 27, & 33), nor the insulating coating layer being a color that has an absorption band corresponding to an oscillation wavelength of a laser used to generate the laser beam (claims 19, 28, & 34), nor the melting layer absorbing less of a laser beam than the insulating coated layer (claims 20, 29, & 35).

Ferlier teaches an enameled wire (Figs 1-3) capable of being marked by a laser. (Col 1, lines 4-5) in order to obtain the underlying layer (Col 1, lines 40-47). Specifically, With respect to claims 12-14, 25-26, & 31-32, Ferlier discloses that the insulated coated layer (20 & 21) comprises a colored resin, which is colored with a pigment (Cols 2 & 3, lines 23-30 & 50-55 respectively), that efficiently absorbs the laser beam (Col 4, lines 23-29). With respect to claim 15, Ferlier teaches that an enameled wire having a

Art Unit: 2831

transparent outer layer (i.e. melting layer), which is transparent, is known in the art (Col 1, lines 18-25). With respect to claims 15, 18, 27, & 33, Ferlier discloses that the insulated coated layer (20 & 21) is non-transparent (i.e. black, Col 3, lines 50-57). With respect to claims 19, 28, & 34, Ferlier discloses that the insulated coated layer (20 & 21) are color to have an absorption band corresponding to an oscillation wavelength of a laser used to generate the laser beam (Col 3, lines 1-17). With respect to claims 20, 29, & 35, Ferlier discloses that the insulating coated layer (20 & 21) is capable of absorbing more of the laser beam than the melting layer is to absorb (Col 4, lines 23-29).

With respect to claims 12-15, 25-29 and 31-34, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the enameled wire of AOAPA to comprise the colored insulating layer as taught by Ferlier because Ferlier teaches that such a configuration provides the capability to obtain the underlying layer (Col 1, lines 40-47) and makes it possible to obtain a high quality marking (Col 2, lines 8-11)

With respect to claim 15, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the melting layer of Ferlier to be made of transparent material, since it is well known in the art of enameled wires that transparent layers are commonly utilized in cables and since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

***Communication***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WHM III  
February 4, 2004

William H. Mayo III  
Primary Examiner  
Art Unit 2831